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REPORT TO THE CONGRESS

Program To Increase Graduates From Health Professions Schools And Improve The Quality Of Their Education

B 164031(2)

National Institutes of Health

Department of Health, Education,
and Welfare

*BY THE COMPTROLLER GENERAL
OF THE UNITED STATES*

094037

OCT 3, 1972



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D C 20548

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/ To the President of the Senate and the
Speaker of the House of Representatives

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/ This is our report on the program to increase graduates from
health professions schools and improve the quality of their education,
administered by the National Institutes of Health, Department of
Health, Education, and Welfare

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Our review was made pursuant to the Budget and Accounting Act,
1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950
(31 U.S.C. 67)

Copies of this report are being sent to the Director, Office of
Management and Budget, and to the Secretary of Health, Education,
and Welfare.

Thomas B. Argets

Comptroller General
of the United States

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ABBREVIATIONS

AMA	American Medical Association
GAO	General Accounting Office
HEW	Department of Health, Education, and Welfare
HPEI	Health Professions Educational Improvement
NIH	National Institutes of Health

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

PROGRAM TO INCREASE GRADUATES
FROM HEALTH PROFESSIONS SCHOOLS
AND IMPROVE THE QUALITY OF
THEIR EDUCATION
National Institutes of Health,
Department of Health, Education,
and Welfare B-146031(2)

D I G E S T

WHY THE REVIEW WAS MADE

The current shortages of physicians and dentists in the United States are estimated at 50,000 and 20,000, respectively. Congressional committees have stated that the need for health manpower is critical and that the shortage is especially acute in rural and inner-city areas.

The principal objectives of the Health Professions Educational Improvement Program are to increase the output of health professions schools and to improve the quality of education in these schools. The Program is administered by the National Institutes of Health (NIH), Department of Health, Education, and Welfare (HEW).

Since the beginning of the Program in fiscal year 1966, grants of about \$373.6 million have been awarded to schools of medicine, osteopathy, dentistry, optometry, pharmacy, podiatry, and veterinary medicine. Grants to schools of medicine and dentistry have accounted for about 84 percent of the total grants awarded.

The Comprehensive Health Manpower Training Act of 1971 modified and expanded the purposes for which grants might be awarded, authorized the use of contracts for certain

types of projects, and greatly increased the amount of money available for the Program.

Because of the importance of the Program's objectives and the cost of the Program, the General Accounting Office (GAO) reviewed its management.

FINDINGS AND CONCLUSIONS

Program progress

Grants awarded under the Program have assisted medical and dental schools to increase enrollments and have provided assistance which could result in improved educational quality. (See pp 27 and 31.)

HEW and NIH have not established the annual increases in enrollments needed to eliminate the shortages of health professionals in the United States. In fact, there are no specific estimates as to what the desirable supply of health personnel should be. (See p 30.)

Other matters

The schools reviewed by GAO used grant funds primarily for salaries and related costs. (See p 34.) GAO found that the accuracy of faculty statistics was questionable.

at some schools (see p 35) and that some faculty members paid under the grants devoted much of their time to activities other than teaching (See pp 36 and 37)

NIH had not established (1) uniform criteria for use by schools in classifying faculty members as full or part time or (2) specific criteria for determining the extent to which grant funds might be used to support faculty members' salaries (See pp 36 and 37)

None of the schools reviewed by GAO maintained adequate payroll substantiation systems, as required by NIH, to support expenditures of grant funds for faculty salaries (See p 42)

NIH should restate its requirements to grantees and should insure that substantiation systems are maintained (See p 43) NIH's policy on substantiation systems does not require functional breakdowns of faculty members' activities. Such a requirement would provide a means for determining whether grant funds were being used for unallowable activities (See pp 43 and 44)

RECOMMENDATIONS OR SUGGESTIONS

The Secretary of HEW should direct NIH to

--determine the manpower required in each of the health professions to serve the needs of the Nation's population adequately,

--establish a plan, including annual goals for enrollment increases in health professions schools, for attaining the required manpower, giving consideration to the capabilities of schools and the availability of Federal and non-Federal funds (see p 31),

--establish uniform criteria for classifying faculty members as full or part time and establish specific criteria for determining the extent to which grant funds may be used to support faculty members' salaries (see p 38), and

--restate to grantees the requirement for payroll substantiation systems, adding a new requirement for functional breakdowns of faculty members' activities, and take followup action to insure that such systems are maintained (see p 43)

AGENCY ACTIONS AND UNRESOLVED ISSUES

HEW reported that a coordinated approach to determining manpower requirements and establishing a plan for meeting the requirements was underway and that a number of actions had been taken (See p 32)

HEW reported that action would be taken to develop criteria for classifying faculty members as full or part time (See p 39) HEW commented on the purposes for which grant funds might be used but did not report whether criteria would be established to determine the extent of support for faculty members' salaries GAO believes such criteria are needed (See pp 39 and 40)

In reporting actions that would be taken concerning grantees' payroll substantiation systems, HEW stated that it did not believe it was practicable or desirable at

this time to require grantees to include in their systems functional breakdowns of faculty members' activities HEW noted that studies being undertaken should represent an important step in efforts to develop methods to accomplish this (See pp 39 and 44)

MATTERS FOR CONSIDERATION
BY THE CONGRESS

This report has no recommendations requiring legislative action by the Congress but contains information on the management of the Health Professions Educational Improvement Program now under expansion

CHAPTER 1

INTRODUCTION

The principal objectives of the Health Professions Educational Improvement (HPEI) Program are to increase the output of health professions schools and to improve the quality of education in such schools. Under the Program, grant support is provided to schools of medicine, dentistry, osteopathy, pharmacy, optometry, veterinary medicine, and podiatry.

The Program is administered by the Bureau of Health Manpower Education, National Institutes of Health (NIH), Department of Health, Education, and Welfare (HEW). This Bureau was transferred to NIH from the Public Health Service in April 1968.

In its report¹ on the bill which was later enacted as the Comprehensive Health Manpower Training Act of 1971 (Public Law 92-157), the House Committee on Interstate and Foreign Commerce made the following comments on the need for health professions personnel

"The need for health manpower is critical.

"The fact that today's demand for health services and for health manpower in the United States outruns the supply is so well known that it hardly seems to need proof.

"Although much remains to be done to refine methods of measuring manpower needs and demands, there is overwhelming evidence of both needs and demands that are unmet today.

"Demand for health services has been growing--and will continue to grow--in response to a variety of changing and interrelated circumstances and needs. These include:

¹H. Rept. 258, 92d Congress, 1st sess., June 9, 1971.

"Population growth,
Rising consumer incomes;
Increasing insurance coverage;
Public policies giving increased
attention to the disadvantaged,
and
Developments of medical science and growth
of specialization."

The Committee report noted that the current physician shortage is commonly estimated at 50,000. The American Dental Association estimates the current shortage of dentists to be 20,000.

The Department of Labor has projected that by 1980, 450,000 physicians and 130,000 dentists would be needed. Labor also has estimated that, starting in 1968, 20,000 new physicians and 4,900 new dentists would be needed each year to meet the requirements of 1980. In the 1970-71 school year, 8,974 students graduated from medical schools and an estimated 3,760 students graduated from dental schools in the United States.

The HPEI Program is part of an overall Health Professions Educational Assistance Program directed toward meeting the critical needs for doctors, dentists, and other professional health personnel. The other types of assistance provided under other portions of the overall program are matching grants for the construction or renovation of teaching facilities, loans for health professions students, and scholarships for health professions students having exceptional financial need.

The HPEI Program was initiated in fiscal year 1966 by the enactment of the Health Professions Educational Assistance Amendments of 1965 (79 Stat. 1052). This law was incorporated into title VII of the Public Health Service Act. The Health Manpower Act of 1968 (82 Stat. 773) made significant modifications to the program and added schools of pharmacy and veterinary medicine to those schools eligible for assistance. These changes became effective in fiscal year 1970

TYPES OF GRANTS

Two types of grants are awarded under the HPEI Program-- institutional grants, based on a statutory formula, and special project grants, awarded for specific projects. Before fiscal year 1970 special project grants could be made only if appropriations were not expended in meeting the formula requirements for institutional grants. Because sufficient funds were not available, no special project grants were made until fiscal year 1968. In fiscal year 1970 the Secretary of HEW was authorized to allocate the appropriations between the two types of grants unless the appropriation acts provided otherwise.

To be eligible for either type of grant, an applicant must be a public or other nonprofit school meeting specified accreditation standards. An applicant must provide assurance that, in carrying out its functions as a school, it will continue to expend at least as much in non-Federal funds as the average of the amounts expended in each of the 3 preceding years. Applications for grants may not be approved or disapproved except after consultation with the National Advisory Council on Health Professions Educational Assistance, which is composed of the Director of NIH, as Chairman, and 14 members appointed by the Secretary of HEW.

Institutional grants

Applicants for institutional grants are required to provide assurance that first-year enrollments of full-time students will be increased by the numbers specified by law. Each school receives a base amount specified by law plus an amount related to the size of the full-time enrollment in the school. NIH instructions state that institutional grant funds may be used for any purpose which a school judges will most effectively advance its educational program. Grant funds, however, may not be used for the operation of teaching hospitals; patient care; financial assistance to students, interns, and residents, research; or construction.

Special project grants

These grants were originally authorized for projects which contributed toward the maintenance of, or provided for,

accreditation or specialized functions which a school served. The Health Manpower Act of 1968 made significant changes in the purposes for which special project grants could be awarded, effective with fiscal year 1970 grants. These purposes included, among others, increasing the supply of adequately trained personnel, assisting schools in serious financial straits, and effecting significant improvements in curricula.

The 1968 act requires that, in determining priorities among project applications, the Secretary of HEW shall consider (1) the extent to which the project will increase enrollment of full-time students, (2) the relative need of the applicant for financial assistance to maintain or provide for accreditation or to avoid curtailing enrollment or reducing the quality of training provided, and (3) the extent to which the project may result in improved curricula or methods of training or help to reduce the period of required training without adversely affecting the quality of the training.

The purposes for which special project grant funds may not be used are basically the same as for institutional grants.

AMOUNTS APPROPRIATED AND GRANTS AWARDED

The amounts authorized and appropriated for educational improvement grants through fiscal year 1971 were as follows.

<u>Fiscal year</u>	<u>Authorization</u>	<u>Appropriation</u>
	(millions)	
1966	\$ 20.0	\$ 10.5
1967	40.0	30.0
1968	60.0	52.5
1969	80.0	66.0
1970	117.0	105.0
1971	<u>168.0</u>	<u>124.0</u>
Total	<u>\$485.0</u>	<u>\$388.0</u>

Total grants awarded through June 30, 1971, classified by type of school and type of grant, are shown in the following table:

<u>Type of school</u>	<u>Institutional grants</u>	<u>Special project grants</u>	<u>Total grants</u>
	(millions)		
Medicine	\$109.8	\$115.4	\$225.2
Dentistry	48.0	40.2	88.2
Pharmacy	19.8	.4	20.2
Optometry	7.6	6.9	14.5
Osteopathy	5.8	5.8	11.6
Podiatry	3.5	3.8	7.3
Veterinary medicine	<u>5.1</u>	<u>1.5</u>	<u>6.6</u>
Total	<u>\$199.6</u>	<u>\$174.0</u>	<u>\$373.6</u>

Grants to schools of medicine and dentistry accounted for about 84 percent of the total grants awarded.

CHANGES IN LEGISLATION

The authorizing legislation for the HPEI Program expired on June 30, 1971. On November 18, 1971, the President signed the Comprehensive Health Manpower Training Act of 1971, which made major changes in the Program and extended it for 3 years.

Institutional grants were replaced by capitation grants, which provide greatly increased levels of support to health professions schools. The formulas for these grants provide incentives for schools to shorten their training programs and to increase their enrollments. Schools can also receive grants for students taking training as physicians' assistants or dental therapists.

The 1971 act modified and expanded the purposes for which special project grants could be awarded and deleted the statutory requirement related to determining priorities among project applications. Some of the new or modified purposes are to assist in improving the distribution of health professions personnel and to utilize health personnel more efficiently. The act also authorizes the Secretary of HEW to enter into contracts with public or private health or educational entities to carry out any project authorized under the special project grant provisions of the act.

The act added three new categories of assistance. The principal new category is health manpower education initiative awards to improve the distribution, supply, quality, utilization, and efficiency of health personnel and the health services distribution system. Grants and contracts can be awarded to public or private health or educational institutions. The two other new categories are start-up grants to new schools of medicine, dentistry, and osteopathy and grants to assist schools in financial distress (formerly authorized under special project grants).

The new act vastly increased the appropriations authorized for the Program. The authorizations total \$427 million for fiscal year 1972, \$503 million for 1973, and \$590 million for 1974. The amount appropriated for fiscal year 1972 was \$255.5 million.

CHAPTER 2

SUPPLY AND DISTRIBUTION OF PHYSICIANS AND DENTISTS

According to the American Medical Association (AMA), there were 334,028 Federal and non-Federal physicians in the United States and its possessions as of December 31, 1970. The classifications, by activity, of these physicians were

<u>Activity</u>	<u>Number</u>	<u>Percent</u>
Patient care.		
Office-based practice		
General	52,023	15.6
Specialties	<u>140,416</u>	<u>42.0</u>
	192,439	57.6
Hospital-based practice	<u>86,096^a</u>	<u>25.8</u>
	278,535	83.4
Medical teaching	5,588	1.7
Administration	12,158	3.6
Research	11,929	3.6
Other activities	2,635	.8
Inactive	19,621	5.9
Unclassified	358	.1
Address unknown	<u>3,204</u>	<u>.9</u>
Total	<u>334,028</u>	<u>100.0</u>

^aInterns, residents, and full-time hospital staff.

According to the Bureau of Health Manpower Education, there were 118,175 dentists in the United States as of July 1, 1970, excluding graduates of that year. Of this number 102,885 were active. Almost all dentists provide care to patients and most are general practitioners.

Between 1950 and 1970 the number of medical doctors in the United States and its possessions increased, as follows.

	<u>1950</u>	<u>1970</u>	<u>Percent of increase</u>
Active Federal (note a)	12,576	29,501	134.6
Active non-Federal	196,421 ^b	281,702	43.4
Inactive and address unknown	<u>11,000</u>	<u>22,825</u>	107.5
Total	<u>219,997</u>	<u>334,028</u>	51.8

^aMilitary services, Veterans Administration, Public Health Service, and other Federal agencies.

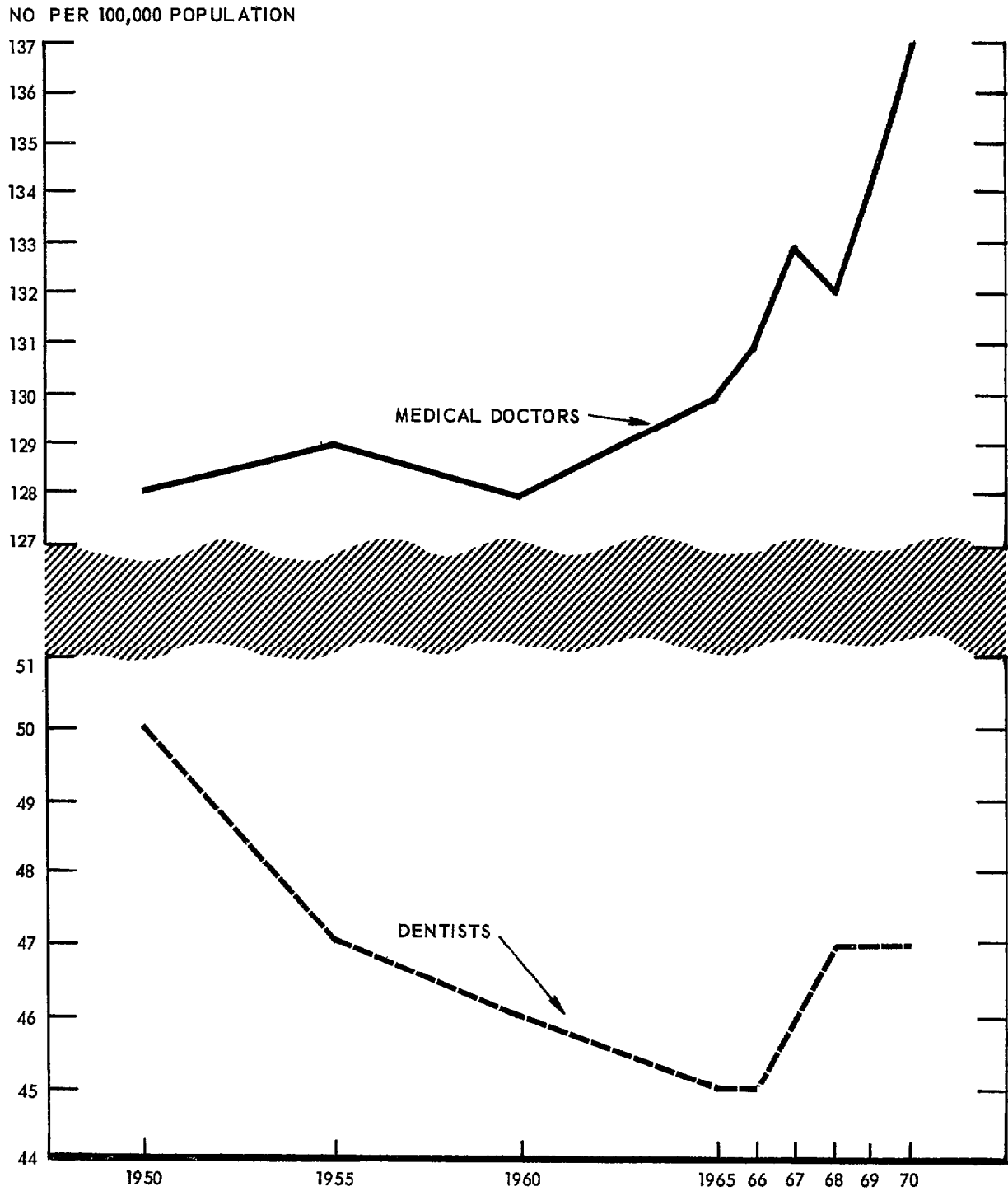
^bIncludes Federal interns and residents.

As shown in the graph on page 13, which is based on data compiled by the Bureau, the ratio of non-Federal doctors increased from 128 to 137 per 100,000 civilian population during this period. In a September 1970 report to the President and the Congress, however, HEW stated that the increase in the past few years was attributable mainly to an increase of foreign-trained physicians, rather than to increased output by U.S. schools. HEW noted that 25 percent of the newly licensed physicians in 1969 were foreign trained. According to AMA, 16.5 percent of the total physician population in 1969 was foreign trained.

The situation for dentists is somewhat different. There has been some increase in the number of dentists, as shown in the following table.

	<u>1950</u>	<u>1970</u>	<u>Percent of increase</u>
Active Federal	2,387	7,463	212.7
Active non-Federal	75,513	95,422	26.4
Inactive	<u>9,264</u>	<u>15,290</u>	65.0
Total	<u>87,164</u>	<u>118,175</u>	35.6

**ACTIVE NON-FEDERAL MEDICAL DOCTORS AND DENTISTS PER 100,000
CIVILIAN POPULATION 1950-1970**



Source Prepared By GAO

The dentist-population ratio, however, has not improved. As shown in the graph on page 13, the 1970 ratio of 47 active non-Federal dentists per 100,000 civilian population was lower than the 1950 ratio of 50 dentists per 100,000 civilian population. According to the Bureau of Health Manpower Education, the highest ratio of dentists to population ever attained was in 1930, when there were 58 dentists per 100,000 population.

According to HEW, foreign graduates do not constitute an immediate manpower resource in dentistry, as they do in medicine, because dentists trained outside the United States, except for graduates from Canadian schools, must take additional courses in United States schools to qualify for licensure.

Although the supply of physicians and, to a lesser extent, dentists has increased in recent years, a serious problem still exists in their distribution. The Senate Committee on Labor and Public Welfare has stated that the shortage of all types of health manpower is especially acute for millions of Americans living in rural and inner-city areas.¹

The physician-population ratios differ widely among the States, a situation which has changed little in the past 30 years according to HEW. Data compiled by the Bureau showed that in 1970 there were 126 active non-Federal physicians providing patient care per 100,000 civilian population in the United States. These data also showed, however, that the ratios in the individual States ranged from highs of 198 and 165 in New York and Massachusetts, respectively, to lows of 71 and 73 in Alaska and South Dakota, respectively. The physician-population ratios by State are shown on the map on page 16 and the ratios by geographic division are shown on the graph on page 17. The map and graph are based on data compiled by AMA and the Bureau.

Compounding the problem of distribution of physicians among the States is maldistribution within the States. According to HEW, even those States which have a relatively good supply of physicians often have serious shortages in

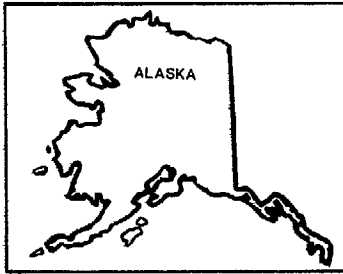
¹S. Rept. 251, 92d Congress, 1st sess., July 12, 1971.

parts of their central cities and in rural areas. The President, in his message on health to the Congress on February 18, 1971, stated that over 130 counties in the United States had no private doctors. He also said that some areas of New York City had one private doctor for every 200 persons and that other areas had one for every 12,000. Data compiled by AMA on the distribution of physicians by size of county show that the population per physician decreases as the total county population increases, as shown by the graph on page 18. AMA noted that metropolitan areas¹ with good medical facilities and high per capita incomes tended to attract the major share of physicians.

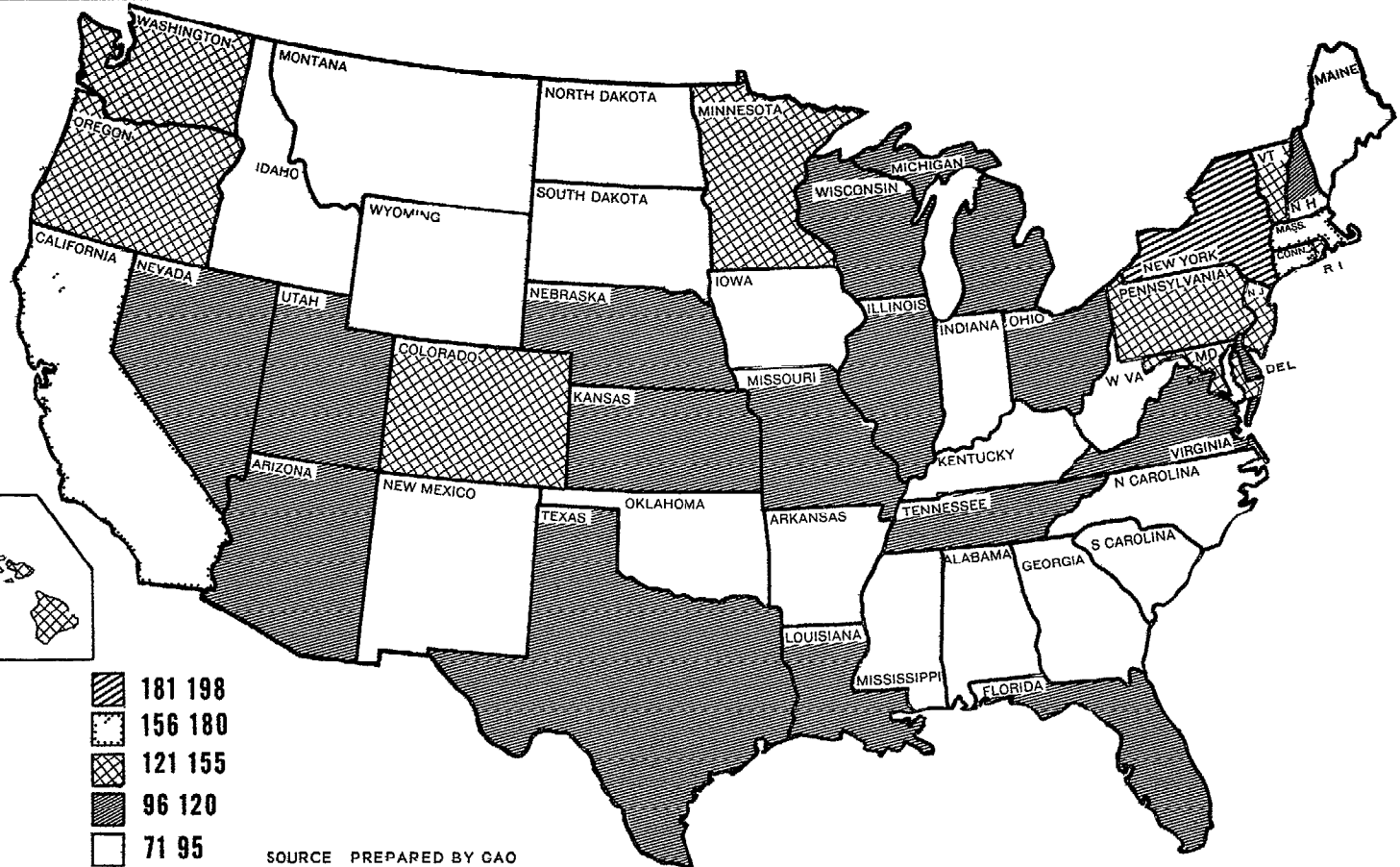
A similar maldistribution of dentists exists. Data compiled by the Bureau showed that in 1970 there were 47 active non-Federal dentists per 100,000 civilian population in the United States. The ratios in the individual States, however, ranged from highs of 68 and 67 in New York and Oregon, respectively, to lows of 26 and 27 in Mississippi and South Carolina, respectively. According to HEW, the Nation's largest metropolitan areas had two to three times the number of dentists in relation to population that counties with small central cities had.

The dentist-population ratios by State are shown on the map on page 19 and the ratios by geographic division are shown on the graph on page 20. The map and graph are based on data compiled by the Bureau.

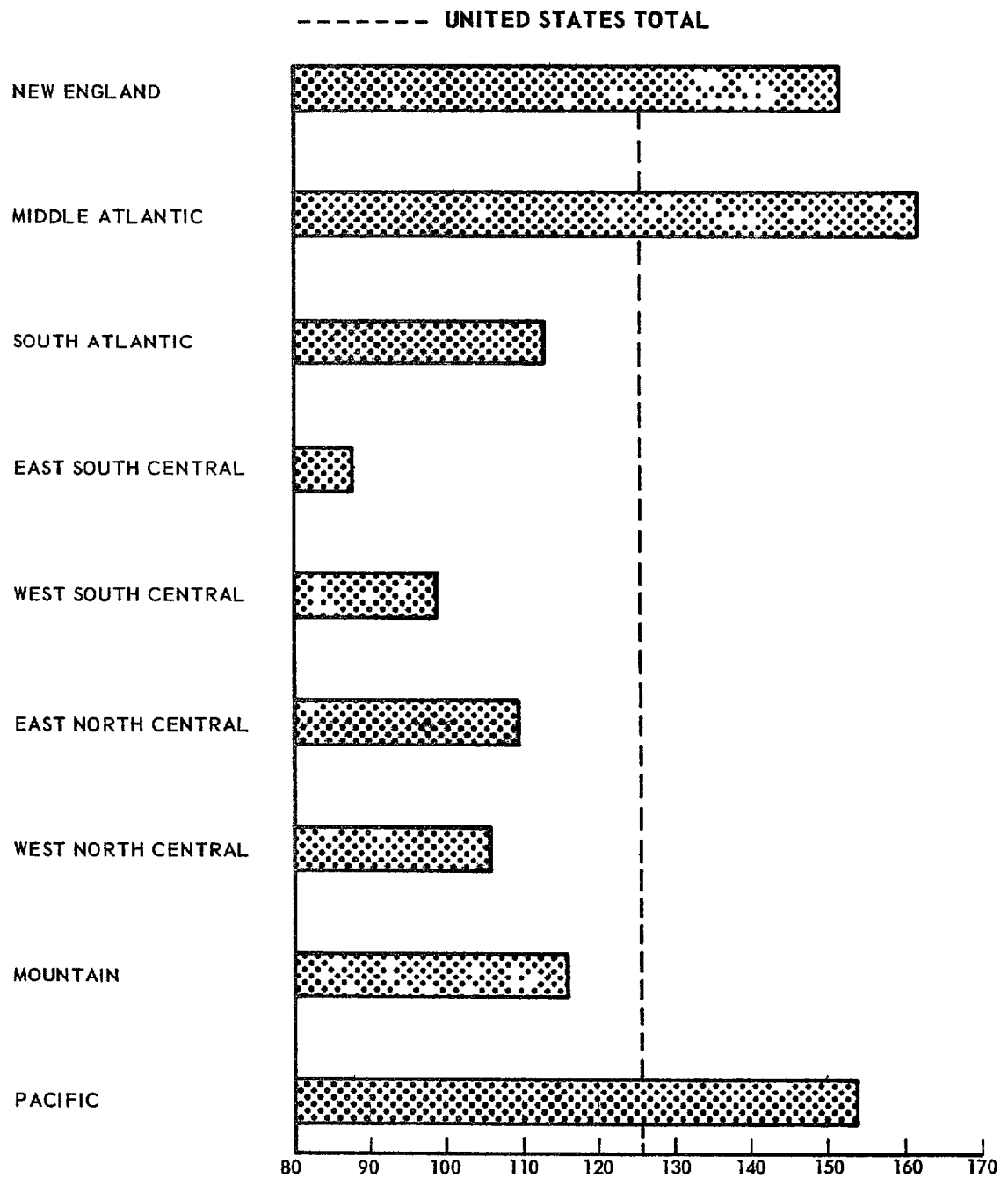
¹As used by AMA, a metropolitan area is described as having (1) a central city of 50,000 or more inhabitants, (2) the remainder of the county in which the central city is located, and (3) contiguous counties which are integrated economically and socially with the county containing the central city. The metropolitan category also includes areas--referred to as potential metropolitan--which are considered as candidates for metropolitan status.



ACTIVE NON-FEDERAL PHYSICIANS PROVIDING PATIENT CARE PER 100,000 CIVILIAN POPULATION 1970



**NUMBER OF ACTIVE NON-FEDERAL PHYSICIANS
PROVIDING PATIENT CARE PER 100,000 CIVILIAN
POPULATION, BY GEOGRAPHIC DIVISION
1970**



SOURCE PREPARED BY GAO

POPULATION PER PHYSICIAN, BY SIZE OF COUNTY 1969

----- UNITED STATES TOTAL

NON-METROPOLITAN

LESS THAN 10,000
INHABITANTS

10,000 - 24,999
INHABITANTS

25,000 - 49,999
INHABITANTS

50,000 OR MORE
INHABITANTS

METROPOLITAN

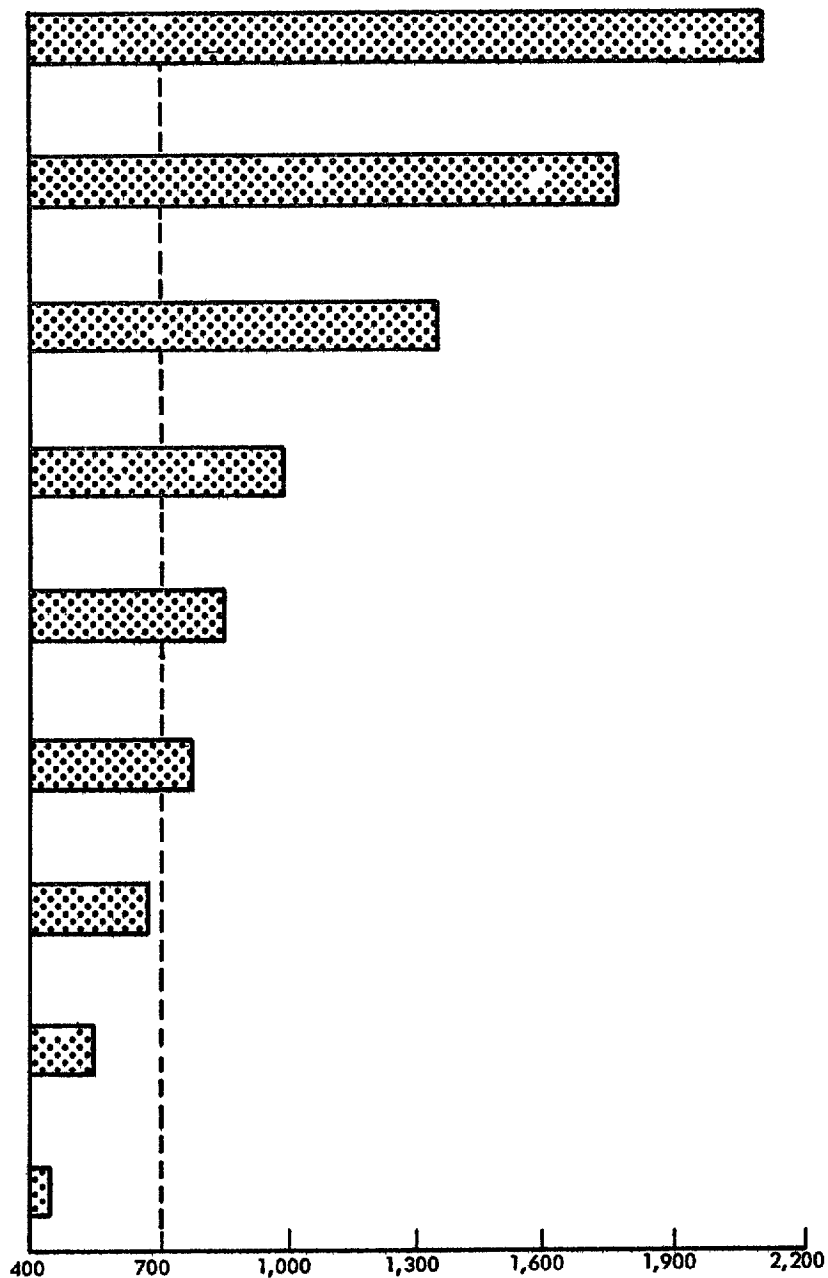
POTENTIAL
METROPOLITAN

50,000 - 499,999
INHABITANTS

500,000 - 999,999
INHABITANTS

1,000,000 - 4,999,999
INHABITANTS

5,000,000 OR MORE
INHABITANTS



SOURCE PREPARED BY GAO

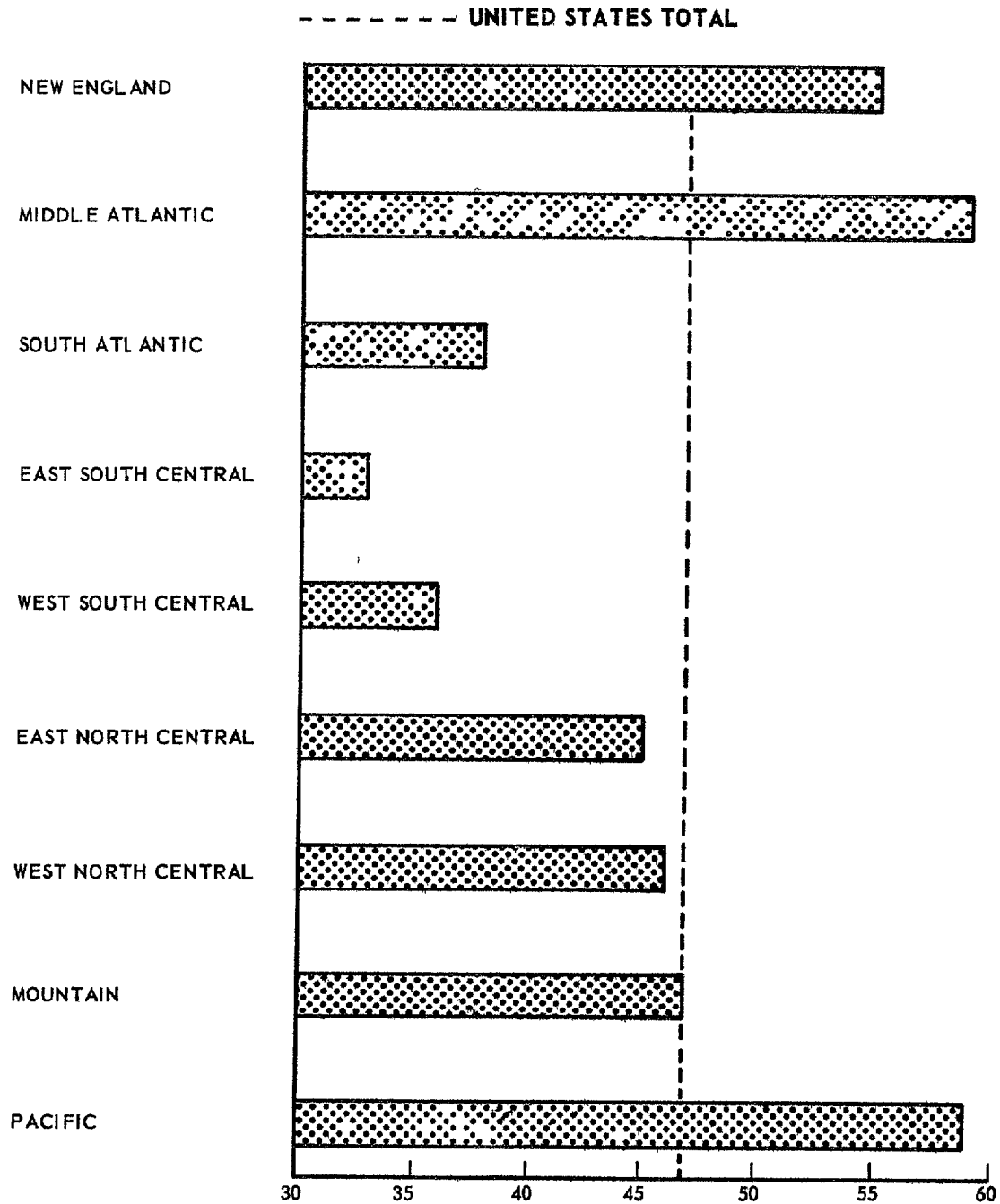
WASHINGTON
OREGON
CALIFORNIA
NEVADA
UTAH
ARIZONA
NEW MEXICO
MONTANA
IDAHO
WYOMING
COLORADO
NORTH DAKOTA
SOUTH DAKOTA
NEBRASKA
KANSAS
TEXAS
OKLAHOMA
ARKANSAS
LOUISIANA
MISSISSIPPI
FLORIDA
ALABAMA
GEORGIA
S CAROLINA
N CAROLINA
VIRGINIA
W VA
MD
DELAWARE
PENNSYLVANIA
NEW YORK
OHIO
INDIANA
ILLINOIS
MISSOURI
IOWA
NEBRASKA
MINNESOTA
WISCONSIN
MICHIGAN
MAINE
VT
NH
MASS
CONN
RI
NJ

61 68
52 60
43 51
34 42
26 33

SOURCE: PREPARED BY GAO

SOURCE PREPARED BY GAO

**NUMBER OF ACTIVE NON-FEDERAL
DENTISTS PER 100,000 CIVILIAN POPULATION,
BY GEOGRAPHIC DIVISION
1970**



SOURCE PREPARED BY GAO

IMPROVING DISTRIBUTION OF PHYSICIANS AND DENTISTS

The legislation authorizing the HPEI Program through fiscal year 1971 had not provided for projects specifically designed to improve the distribution of physicians and dentists. The Comprehensive Health Manpower Training Act of 1971, however, authorized projects of this type.

The act authorized special project grants and contracts for the specific purpose of improving the distribution, by geographic area and specialty, of adequately trained personnel in the health professions. The act also authorized health manpower education initiative awards for the improvement of the distribution of health personnel.

The sections of the act pertaining to student loans and scholarships provide for incentives for health professionals to practice in areas determined by the Secretary of HEW to have a shortage of, and need for, such persons. The Secretary is authorized to make payments of up to 85 percent of the principal of, and interest on, educational loans which have been obtained by persons who practice in shortage areas. He is authorized also to award scholarship grants of up to \$5,000 for each academic year to medical students who agree to engage in the practice of primary care in physician-shortage areas.

ACCELERATING MEDICAL AND DENTAL EDUCATION

In October 1970 the Carnegie Commission on Higher Education issued a report entitled "Higher Education and the Nation's Health: Policies for Medical and Dental Education." One of the commission's recommendations called for accelerating the medical and dental education process. The commission stated that it particularly favored a program of 3 instead of 4 years of training after the Bachelor of Arts degree to obtain the Doctor of Medicine or Doctor of Dental Surgery degree. The commission's report commented, as follows, on the benefits to be realized from such a program:

"If all medical schools were to move from a four-year to a three-year program between the

baccalaureate and M D degrees, the size of each class could be increased by nearly one-third without increasing the total number of students enrolled at any one moment of time and without requiring additional physical facilities. Since the training would be more intensive, additional faculty members would still be required, but substantial savings would nevertheless be possible. Nearly two-thirds of the construction costs needed to achieve a 52 percent increase in new student places if the four-year programs were continued would be saved by program acceleration. There might also be savings of up to one-third in operating expenses. Institutional cost per students would decrease by about one-third, and a similar reduction in the total amount needed for student assistance would be possible. Clearly, also, the students' loss of foregone earnings would be reduced, and the supply of physicians and dentists could be increased more rapidly if the total duration of the students' education could be reduced "

AMA's report, dated November 23, 1970, on Medical Education in the United States during the 1969-70 school year, noted that programs permitting a student to receive his Doctor of Medicine degree in 3 years have been available for a number of years at four or five medical schools for a relatively small number of selected students. The report noted also that about one-third of the medical schools had begun, or were considering the development of, new accelerated programs which would permit graduation in 3 years after enrollment. AMA anticipated that more medical schools would explore or initiate such programs during the coming years.

The authority for capitation grants contained in the Comprehensive Health Manpower Training Act of 1971 provides specific incentives for schools to shorten their training programs. Under the legislation, a 4-year school of medicine or dentistry may receive \$2,500 for each student in his first 3 years plus \$4,000 for each graduating student--an average of \$2,875 for each year of a student's 4-year course of study. A 3-year school, on the other hand, may receive \$2,500 a year for each student in his 3 years plus \$6,000

for each graduating student--an average of \$4,500 for each year of a student's 3-year course of study

CHAPTER 3

INCREASING THE SUPPLY OF HEALTH PROFESSIONS PERSONNEL

Grants awarded under the HPEI Program have assisted medical and dental schools to increase enrollments. This Program began operation in fiscal year 1966 and was funded at a relatively low level during its first years of operation. Because the usual period of study in medical and dental schools is 4 years, it is too soon for the Program to have had a significant impact on the number of practicing doctors and dentists.

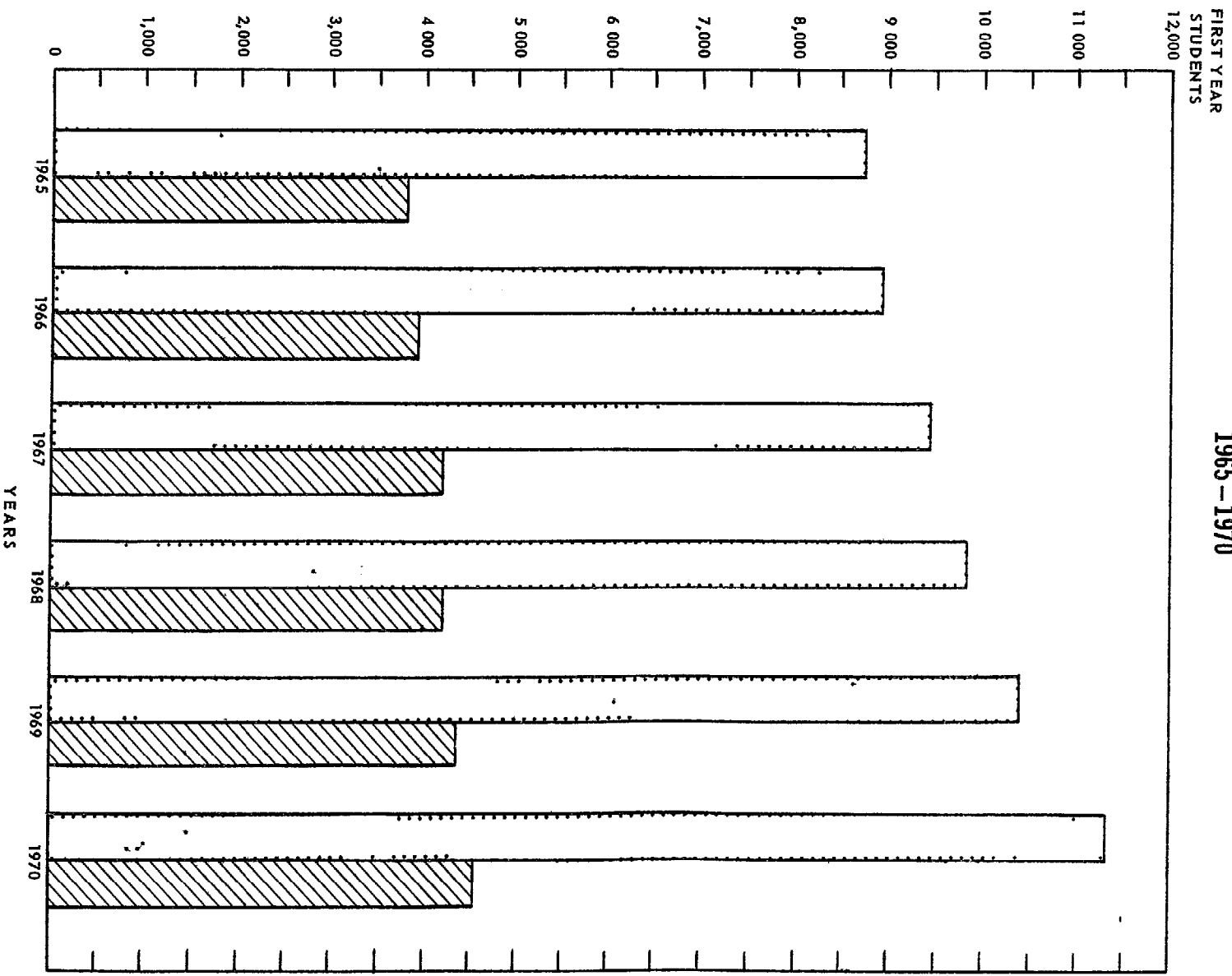
We believe, however, that to manage the program more effectively, NIH should establish a plan, including annual goals, for increasing the supply of health professionals.


INCREASES IN MEDICAL AND DENTAL SCHOOL ENROLLMENTS

Enrollments in medical and dental schools have increased since the Program began in fiscal year 1966. As indicated by the graph on page 25--which is based on data compiled by AMA, the American Dental Association, and the Bureau of Health Manpower Education--first-year enrollments in medical schools increased from 8,759 in 1965 to 11,348 in 1970, an increase of 29.6 percent, and first-year enrollments in dental schools increased from 3,806 to 4,565, an increase of 19.9 percent. In contrast, the increases in first-year enrollments between 1960 and 1965 were only 5.6 percent for medical schools and 5.3 percent for dental schools.

From inception of the program to 1970, the number of medical schools increased from 88 to 103 and the number of dental schools increased from 49 to 53. Two dental schools--which were in existence prior to the program--admitted their last first-year classes during the period, one in the 1966-67 school year and the other in the 1967-68 school year. According to HEW, these two schools are closing because they are unable to finance further operations.

FIRST-YEAR ENROLLMENTS IN MEDICAL AND DENTAL SCHOOLS 1965 - 1970



 MEDICAL
 SOURCE Prepared by GAO

 DENTAL

YEARS

Educational improvement grants are part of an overall Health Professions Educational Assistance Program which also includes matching grants for construction or renovation of teaching facilities and loans and scholarships for health professions students. In a statement presented to the Subcommittee on Public Health and Environment of the House Committee on Interstate and Foreign Commerce, an official of the Association of American Medical Colleges said that the Health Professions Educational Assistance Program has made an important contribution in expanding the medical education of the Nation, despite the limited scope of the program and the fact that appropriations have always been substantially below the amounts authorized. An official of AMA told the Subcommittee that the program had had a positive role in stimulating schools to expand their facilities and enrollments.

In a September 1970 report to the President and the Congress, HEW attributed much of the increase in enrollments to grants awarded for construction or renovation of teaching facilities but noted that construction funds alone would not have been enough and that assistance in meeting operating costs--through educational improvement grants--was also required. HEW stated that educational improvement grant assistance played an essential role in promoting the expansion of schools, whether or not they received construction assistance, by

- using a formula geared to full-time enrollment,
- preventing enrollment curtailment in marginally financed schools,
- requiring increased enrollment under institutional grants, and
- providing special project assistance for increased enrollment.

Officials of the Bureau of Health Manpower Education told us that it was difficult to identify specific increases in enrollments with the type of grant--construction, institutional, or special project--but that they were trying to establish some mechanism to do this.

We reviewed the grant-supported activities at six medical and six dental schools. First-year enrollments have increased at all of these schools since the program began, as shown in the following table.

		First-year enrollment			
		<u>1965-66</u>	<u>1969-70</u>	<u>Increase</u>	<u>Percent of increase</u>
Medical school					
A	88	107	19 ^a	21.6	
B	99	107	8	8.1	
C	130	144	14	10.8	
D	84	101	17 ^a	20.2	
E	85	110	25 ^a	29.4	
F	<u>76</u>	<u>83</u>	<u>7</u>	9.2	
Total	<u>562</u>	<u>652</u>	<u>90</u>	16.0	
Dental school					
U	86	125	39 ^a	45.3	
V	117	121	4	3.4	
W	77	94	17	22.1	
X	115	150	35 ^a	30.4	
Y	36	60	24 ^a	66.7	
Z	<u>47</u>	<u>52</u>	<u>5</u>	10.6	
Total	<u>478</u>	<u>602</u>	<u>124</u>	25.9	

^aSchools with new enlarged facilities constructed, in part, with construction grants.

Although most of the increases at the six schools which had received construction grants were attributable to those grants, officials at several of these schools told us that it would not have been possible to increase enrollments without the increases in faculty made possible by the educational improvement grants.

Dental school V had the smallest enrollment increase.

Its facilities were reported to be excessively overcrowded, which significantly limited their effectiveness, because the facilities were designed for about 100 first-year students.

Officials of most of the schools told us that their schools were operating at maximum capacity and that their existing facilities could not handle additional students. As of March 31, 1971, the Bureau had a backlog of unfunded approved construction grant applications amounting to about \$614 million. In June 1972 HEW informed us that the backlog had been eliminated by the expiration of the authorizing legislation on June 30, 1971. HEW stated that the application materials for construction assistance under the Comprehensive Health Manpower Training Act of 1971 had not been mailed until April 1972 and that many applications had not yet been received. HEW anticipates that the amounts which will be requested will be greater than the funds available.

Dental school Z has received a Federal construction grant for a new facility. The dean told us that first-year classes would be increased by 20 students when the new facility was completed. Medical school B is studying plans to construct a new basic science building and intends to submit an application for a construction grant to NIH. The school's plans call for a first-year enrollment of 160 by 1975. The only other school which plans to increase enrollment is medical school E. It began a special 3-year program with 20 new students in 1970 and planned to have 30 first-year students in this program in 1971.

Two of the schools have initiated programs for shortened 3-year curricula. As mentioned above, medical school E began a special 3-year program in 1970. Officials of dental school X stated that curriculum revisions that had been made should result in graduating the most capable students in 3 years, if dental boards in the States change their licensing requirements to recognize such graduates. The dean anticipates that changes in licensing requirements will be made in the near future by the boards in the three States where most of the school's graduates are located and that within 4 years a large percentage of the students will graduate in 3 years.

Officials at a number of other schools told us that shortened curricula were under consideration but had not yet been implemented.

GOALS FOR INCREASING SUPPLY OF HEALTH PROFESSIONALS

HEW and NIH have not established the annual increases in enrollments needed to eliminate the shortages of health professionals in the United States. According to HEW and the Bureau of Health Manpower Education, varying estimates have been prepared by different organizations on the basis of differing assumptions of what the desirable supply of personnel should be, but none of these estimates are definitive

Bureau officials said that they had come up with some goals for the program but that these were based on what the schools planned to do and on the amount of funds available for the program, not on what needed to be done to eliminate shortages of health professionals. They told us that determining these shortages was a very complex undertaking and that it might prove impossible to come up with definitive determinations. They noted that many factors had to be considered, such as population shifts, the ages of practicing professionals, and how to get professionals to locate in areas of need. They noted also that, if the present distribution of professionals and the present method of providing health care were changed, it would probably help to alleviate some of the problems of supply

We recognize that determining shortages is a difficult undertaking. The size and importance of the HPEI Program, however, make it necessary for NIH to determine, as accurately as practicable, what the shortages are and what personnel would be required to provide a reasonable level of health care for the people of the United States. Examples of some of the considerations which could be included in such a determination are the

- estimated population growth and migration between areas,
- extent to which the distribution of health personnel could be made more uniform,
- physician-population ratios which would be needed to provide adequate health care, and

--extent to which paraprofessionals could be used to supplement the use of professional personnel

Bureau officials agreed that specific program goals were needed and said that they were attempting to develop some goals. They were working on an estimate of the enrollment increases expected to result from the changes made by the 1971 legislation.

CONCLUSIONS

Grants awarded under the HPEI Program have assisted medical and dental schools increase their enrollments. We believe, however, that to manage a large and important program such as this more effectively, NIH should

- determine the manpower required in each of the health professions to adequately serve the needs of the Nation's population;
- establish a period of time for attaining this supply, giving consideration to the capabilities of health professions schools and to the availability of Federal and non-Federal funds, and
- establish annual goals for the enrollment increases which would be needed to achieve the required supply of health professionals within the period of time determined to be practicable

In our opinion, the vastly increased levels of funding provided by the Comprehensive Health Manpower Training Act of 1971 further emphasize the need for established goals for measuring program progress. Such goals would also assist the executive branch and the Congress in evaluating the funding needs of the program from year to year and the impact of any changes that might be required for budgetary reasons.

RECOMMENDATIONS TO THE SECRETARY OF HEW

We recommend that the Secretary of HEW direct NIH to

- determine the manpower required in each of the health professions to adequately serve the needs of the Nation's population and

--establish a plan, including annual goals for enrollment increases in health professions schools, for attaining the required manpower, giving consideration to the capabilities of health professions schools and the availability of Federal and non-Federal funds

In its comments dated June 13, 1972 (see app I), on a draft of this report, HEW made some general comments on our report in addition to its comments on our specific recommendations. These comments are discussed in chapter 6.

Concerning our recommendations, HEW stated that a coordinated approach to these matters was already underway in HEW and reported on a number of actions which had been taken. It has recently reported data on projected health manpower supply and requirements to the Subcommittee on Labor-HEW, House Committee on Appropriations

We believe that the actions reported by HEW and the types of data contained in its report to the Subcommittee are steps in the right direction. The need still exists, however, for a determination of manpower requirements on which NIH's planning can be based and for a plan for attaining these requirements. Because the HPEI Program has been in operation since fiscal year 1966, we believe that HEW and NIH should place emphasis on developing manpower requirements and a plan for attaining these requirements

CHAPTER 4

IMPROVING THE QUALITY OF EDUCATION

Grants awarded under the HPEI Program have provided assistance to medical and dental schools which could result in improved educational quality

NIH told us that educators, particularly in the field of medical education, seemed unable to agree on what constitutes quality in education and that, in view of this, NIH did not plan to establish formal criteria for measuring the progress made in improving quality. NIH said that the needs and objectives of grant applicants were evaluated by peer review groups and NIH Program officials, accreditation committees reviewed the needs of schools, and the quality of education at a school was presumed to have been improved if the school had remedied deficiencies identified through the accreditation process.

PROBLEMS FACING SCHOOLS

Our discussions with school officials and our review of accreditation reports prepared by the Liaison Committee on Medical Education, representing AMA and the Association of American Medical Colleges, and by the Council on Dental Education of the American Dental Association indicated that the schools we reviewed were encountering the following general problems. (1) inadequate physical facilities, (2) lack of adequate financial support, (3) need for additional faculty members, and (4) need for revised curricula. Some examples of these problems are discussed below.

The accreditation report for one dental school noted that enrollment increases had placed a significant strain on available facilities, making it virtually impossible to conduct a modern-day educational program.

Medical school B had been part of a private university until 1967 and had a reported deficit of about \$1 million in the 1966-67 school year. As a result of its financial difficulties, the school severed its ties with the parent university in 1967 to become eligible for State aid. The school received \$3.2 million from the State for the 1969-71 biennium and requested \$7.5 million for the 1971-73 biennium.

Medical school A had a reported deficit of about \$774,000 in the 1968-69 school year, and dental school W had a reported deficit of about \$892,000 for the 1969-70 school year. Officials of the parent universities of the two schools told us that the universities were not able to increase their contributions to these schools.

IMPROVEMENTS FINANCED WITH GRANT FUNDS

The 12 schools we reviewed have used grant funds primarily for personnel costs. The following table shows the expenditures during the period July 1, 1966, through June 30, 1970.

	<u>Institutional grants</u>	<u>Special project grants</u>	<u>Total</u>
	----- (000 omitted) -----		
Personnel	\$6,833	\$4,674	\$11,507
Equipment	747	936	1,683
Alteration and renovation	83	121	204
Other costs	<u>193</u>	<u>213</u>	<u>406</u>
Total	<u>\$7,856</u>	<u>\$5,944</u>	<u>\$13,800</u>

Officials of the schools said that educational improvement grants had assisted in improving the quality of education by enabling increases in faculty, revisions in curricula, and acquisition of equipment for use in instruction.

The president of medical school E's medical center, for example, told us that the school would have to reduce the number of faculty and students if the grant program were discontinued and that any reduction in faculty could endanger

the accreditation of the school. The dean of dental school X said that the school would probably have lost its accreditation without the new facilities constructed with construction grant assistance and the faculty increases achieved with educational improvement grant funds.

Officials of dental school V told us that the school was unable to recruit additional faculty because of a low salary structure. They said that grant funds were primarily used to provide pay raises to retain present faculty members and thus maintain the quality of the educational program at a minimum level. The dean said that the grant funds have enabled the school to stay open.

As noted on page 7, institutional grant funds may be used for any purpose--with certain exceptions--which a school judges will most effectively advance its educational program. The Health Manpower Act of 1968 provided that one of the considerations in determining priorities for special project grants was the relative need of an applicant for financial assistance to maintain or provide for accreditation or to avoid curtailing enrollment or reducing the quality of training provided.

Faculty increases

Faculty statistics indicate that the schools generally have substantially increased the sizes of their faculties since the program began. We found, however, that the accuracy of these statistics was questionable at some of the schools.

For example, medical school B's statistics varied depending on the source of the information. For instance, the school's June 30, 1968, annual report to the Association of American Medical Colleges showed 229 full-time faculty members during the 1967-68 school year. School records indicated that there were only 83 full-time faculty members during that school year.

Medical school C's grant application for the 1970-71 school year showed 259 full-time faculty members as of June 30, 1969. The school's budgeting records, however,

showed a total of 141 full-time faculty members at that time. School officials attributed this discrepancy to the use of different criteria for classifying a faculty member as full or part time. In one case they used the amount of salary as the criterion and in the other they used the amount of effort.

NIH's instructions for grant applications do not specify a uniform method for classifying faculty members as full time.

We were not able to determine the extent to which increases in faculty resulted in increased teaching effort because documentation relating to faculty effort either was not maintained or was inadequate. This lack of adequate documentation for special project grants is discussed more fully in chapter 5.

We found indications that some medical school faculty members were devoting much of their time to activities other than teaching. NIH had not issued adequate guidelines for determining the part of a faculty member's salary eligible for grant support.

Medical schools engage in three principal activities--teaching, patient service, and research. In their reports¹ on the bill which was enacted as the Health Professions Educational Assistance Amendments of 1965, the Senate Committee on Labor and Public Welfare and the House Committee on Interstate and Foreign Commerce stated that the legislation was intended to provide support to aid health professions schools increase the scope and quality of their teaching programs.

NIH's instructions for institutional grants state that grant funds may not be used for

--the operation of teaching hospitals, except for salaries of clinical teaching staffs;

¹S Rept 789, 89th Cong , 1st sess , Sept 28, 1965, and
H Rept 781, 89th Cong , 1st sess , Aug 12, 1965

--patient care, and

--research, except for salaries of faculty members principally engaged in teaching and whose research activities are limited and incidental to their teaching responsibilities

NIH has not defined the meaning of "principally engaged in teaching," and the instructions do not explain how salary costs should be allocated for faculty members who also engage in activities other than teaching

At medical school B, for example, the chairman of a basic science department told us that about 50 percent of his department's effort was devoted to research activities. This department had seven full-time faculty members; grant funds were providing full support for the salaries of two members and 75 percent of the salary for a third member. At medical school A, the clinical department chairmen we interviewed estimated that their faculty members generally devoted 50 percent or more of their efforts to patient-care activities. The salaries of most of the faculty members in these departments were being paid, in full, with grant funds. The chairman of a basic science department at medical school A stated that his faculty members spent 40 to 95 percent of their time on research. Most of the members of this department were supported, in full, by grant funds.

CONCLUSIONS

Grants awarded under the HPEI Program have provided assistance to medical and dental schools which could result in improved educational quality. Discussions with school officials indicated that grant funds had enabled some schools to maintain their accreditation and to stay in operation.

The schools we reviewed have used most of their grant funds for personnel costs. We believe, therefore, that it is important for NIH, in measuring achievements under the Program, to establish uniform criteria for use by schools in classifying faculty members as full time or part time. We also believe that NIH should establish specific criteria, based on the level of effort devoted specifically to teaching, for determining the extent to which grant funds may be used to support faculty members' salaries.

RECOMMENDATIONS TO THE SECRETARY OF HEW

We recommend that the Secretary of HEW direct that NIH establish uniform criteria for classifying faculty members as full or part time and establish specific criteria for determining the extent to which grant funds may be used to support faculty members' salaries.

HEW COMMENTS AND OUR EVALUATION

In its comments (see app. I) HEW stated that the measurement of educational quality was an extremely complex problem, requiring the long-range development of new methods and techniques. HEW stated also that, in view of the changes in the HPEI Program made by the Health Manpower Act of 1968 and the Comprehensive Health Manpower Training Act of 1971,

"*** undue emphasis should not be placed on the generic reference to 'quality' in the title of Part E (Title VII, PHS [Public Health Service) Act) 'Grants and Contracts to Improve the Quality of Schools' ***,"

which authorizes the HPEI Program. HEW stated further that the 1971 act provided specific Program goals, which were more readily measurable than goals under previous legislative authority.

HEW noted that the 1971 act authorized special project grants and contracts for 13 distinct purposes, each of which might be approached in terms of specific measurable goals, and that the Bureau of Health Manpower Education had specified such goals for the seven purposes considered to be of the highest priority in fiscal year 1972.

HEW stated that our recommendation for NIH to establish uniform criteria for classifying faculty members as full or part time had merit and concerns a significant problem in the management of the HPEI Program. HEW said that it did not appear practicable or desirable to impose such criteria unilaterally upon academic institutions and that NIH would initiate efforts through school associations to develop such criteria. In our opinion, this approach, if properly carried out, would be satisfactory.

Concerning our recommendation that NIH establish specific criteria for determining the extent to which grant funds may be used to support faculty members' salaries, HEW did not specifically say whether or not any criteria would be established. HEW's comments generally seem to relate to the differences between institutional (now capitation) grants and special project grants, specifically the broader purposes for which institutional grant funds may be used. HEW stated that funds under financial distress grants and certain types of special project grants could be used for full support of some faculty members' salaries, regardless of the distribution of their efforts, or for support beyond the extent indicated by an accounting of effort devoted to teaching. It believed that the payment of the full salary of teaching faculty from capitation grant funds was consistent with the intent of the Congress, HEW specifically cited page 16 of Senate Report No. 244, 92d Congress, as showing that "*** the Senate clearly considered the cost of research and patient care within the costs appropriate for expenditure of capitation grants."

The portion of the Senate Report¹ cited by HEW actually reads as follows

"To the extent essential for the education of the students the Committee understands that the costs of research and the costs of patient care are integral to per student costs of the institution. And that they shall be included in the calculation of costs for the purpose of applying for their entitlement grant." (Underscoring supplied.)

It should also be noted that the authorization for capitation grants--section 770(a) of the Public Health Service Act, as amended by the Comprehensive Health Manpower Training Act of 1971--states that:

"The Secretary [of HEW] shall make annual grants to schools of medicine, osteopathy, dentistry, veterinary medicine, optometry, pharmacy, and

¹S. Rept. 251 (Calendar No. 244), 92d Cong., 1st sess., July 12, 1971.

podiatry for the support of the education programs of such schools." (Underscoring supplied.)

We believe, therefore, that it is necessary for NIH to establish specific criteria for determining the extent to which grant funds may be used to support faculty members' salaries.

CHAPTER 5

NEED FOR IMPROVEMENTS IN RECORDING FACULTY EFFORT

We found that none of the schools we reviewed, which received special project grant funds, maintained adequate payroll substantiation systems to support expenditures of these funds for faculty salaries. Also a need existed for grantees to include functional breakdowns of faculty members' activities in their payroll substantiations systems.

INADEQUATE PAYROLL SUBSTANTIATION SYSTEMS

NIH's instructions on special project grants provide that grant funds must be used solely for the purposes described in the approved grant application or for such related purposes as may subsequently be approved as necessary for the project. The instructions provide also that salaries and wages of professional staff are to be charged to the grant in proportion to the distribution of their total effort between activities within the scope of the approved project and other activities

In March 1969 NIH issued a policy statement to grantees on budgeting and accounting for salaries. This policy stated that grantees would be expected to employ appropriate systems for substantiating their payrolls and to provide adequate bases for adjusting budgeted salary amounts when needed. The following standards were prescribed for the substantiation systems.

"Grantees will be given maximum discretion to adopt systems appropriate to their individual needs, which are in accordance with generally accepted accounting practices. Such systems must, however, meet the following minimum standards:

"A Direct charges for professionals must be supported by either.

"1. An adequate appointment and workload distribution system, accompanied by monthly reviews signed by responsible officials,

including the reporting of any significant changes in workload distribution of each professional (i.e., an exception reporting system) The grantee's file under such a system must contain at least the following information

- a. the individual's total annual (or academic year) salary and whether it represents full- or part-time service (If the individual has an academic year appointment, the file must also indicate the number of months covered by his appointment),
- b. the estimated percentage of the individual's total salaried services to be devoted to the grant-supported activity, and
- c. a listing of other salaried duties he is expected to perform during the budget period

"OR

"2 A monthly after-the-fact certification system which required persons in supervisory positions with first-hand knowledge of the services performed to report the distribution of effort.

"Such reports must account for the total salaried effort of the persons covered. Consequently, a system which provides for the reporting only of effort applicable to federally sponsored activities is not acceptable "

At the time of our fieldwork, the six medical schools and four of the six dental schools we reviewed had received special project grant funds. These schools had expended about \$4.2 million of special project grant funds for faculty salaries, but none of them maintained payroll substantiation systems which fully complied with the minimum standards.

Four of the medical schools--schools A, D, E, and F--and the four dental schools--schools U, X, Y, and Z--did not maintain payroll substantiation systems. Officials at these schools generally stated that they were not aware of the NIH requirement for substantiation systems.

Medical schools B and C did have systems of reporting faculty efforts, but their reports were prepared quarterly. NIH policy requires a monthly review or certification. At medical school B, the reports were not maintained for all faculty members. A school official told us that a faculty member for whom no records were maintained was presumed to be spending all of his time on one project or activity. The documentation maintained by these two schools did not show functional breakdowns--teaching, research, patient care--of faculty members' efforts, and so we were not able to ascertain whether grant-supported faculty members were devoting time to activities for which grant support was not allowable. NIH policy on substantiation systems does not specifically require such breakdowns.

CONCLUSIONS

The schools we reviewed, which received special project grant funds, did not maintain adequate payroll substantiation systems to support the expenditures of about \$4.2 million of these funds for faculty salaries through June 30, 1970.

We believe that NIH needs to restate to grantees the requirement for substantiation systems for payroll charges to special project grants and to take follow-up action to insure that such systems are maintained. We believe also that NIH should revise its policy to require grantees to include in these systems functional breakdowns of faculty members' activities. Such breakdowns are needed to provide means for determining whether grant funds are being used for activities which are not allowable under the program.

RECOMMENDATIONS TO THE SECRETARY OF HEW

We recommend that the Secretary of HEW direct that NIH restate to grantees the requirement for payroll substantiation systems and that it take follow-up action to insure

that such systems are maintained. We recommend also that NIH require grantees to include in their substantiation systems functional breakdowns of faculty members' activities.

In its comments (see app I), HEW stated that NIH would call attention to the requirement for payroll substantiation systems. HEW stated also that Bureau of Health Manpower Education staff would follow up with institutions suspected of being weakest in the management of such systems and that our recommendation would be called to the attention of the HEW Audit Agency.

HEW did not believe that it was either practicable or desirable at this time to require grantees to include in their payroll substantiation systems functional breakdowns of faculty members' activities because it could not be assumed that such breakdowns were equatable with eligibility for grant support. HEW noted that a great deal remained to be done before it could compare the educational function of a school with the instructional activity. HEW stated further that studies to determine a national average per student educational cost, as required by the Comprehensive Health Manpower Training Act of 1971, would be undertaken by the National Academy of Sciences and should represent an important step in efforts to develop reliable methodologies for this purpose.

CHAPTER 6

GENERAL HEW COMMENTS AND OUR EVALUATION

In its comments (see app. I), HEW made some general comments on our report which did not relate to our specific recommendations.

The first of these comments was that our review covered 12 midwestern grantees, nearly all of which, according to HEW, have, or have had, serious financial and/or management problems. HEW contends that, therefore, these grantees would not necessarily be representative of the total universe of health professions schools.

We do not agree with HEW's contention that the schools we reviewed may be somehow unusual and that, therefore, they are not necessarily representative. The major emphasis in our selection was on universities which had participated in both the institutional and special project grant programs from their inception. The schools we reviewed included both State-run and private schools in four States and included some of the largest medical and dental schools in the United States as well as schools of more modest size. We realize that all the schools are located in Midwestern States, but we fail to see any reason for considering midwestern schools to be somehow inherently different from schools in other parts of the country, as HEW's comments seem to imply

HEW comments that the grantees we reviewed have, or have had, serious financial and/or management problems and so are not necessarily representative. We do not believe that the existence of such problems makes a school unique. The President, in his message on health to the Congress on February 18, 1971, noted that, in the preceding year, over half the Nation's medical schools had declared that they were in financial distress and had applied for special Federal assistance to meet operating deficits. During the 1971 hearings before the Subcommittee on Public Health and Environment, House Committee on Interstate and Foreign Commerce, on bills to revise and extend the health professions education legislation, representatives of the Association of American Medical Colleges and the American Dental Association and the American Association of Dental Schools stated that

most medical and dental schools were encountering serious financial problems. In addition, the Senate Committee on Labor and Public Welfare, in its report¹ on a bill to extend and expand the Health Professions Educational Assistance Program, stated that "Virtually all [health professions] schools have had to begin to undermine the quality of their educational programs due to severe and prolonged financial distress."

HEW's second general comment was that some of our recommendations were more relevant to the HPEI Program under past legislation than to the programs authorized by the Comprehensive Health Manpower Training Act of 1971. Although we recognize that the 1971 act made significant changes to the program (see p 10), nevertheless we believe that our recommendations are still relevant to the revised program. This matter is covered in more detail in connection with HEW's specific comments on our recommendations (See pp 32 and 38)

The third general comment was that our report overemphasized numbers and ratios as indicators of manpower supply, output, and requirements. In our opinion, the most meaningful way to measure the supply of, output of, and need for health manpower is by using specific numbers and ratios, and such measurements are needed by NIH to effectively manage the HPEI Program.

HEW also commented that our report did not appear to take cognizance of the full range of efforts now underway to assess health manpower needs. This comment is discussed on page 32 in connection with HEW's comments on our recommendations regarding manpower needs and goals. It is pertinent to note, however, that the HPEI Program has been in operation since fiscal year 1966 and that NIH still has not come up with specific manpower needs and goals for the program.

¹S. Rept. 251, 92d Cong , 1st sess., July 12, 1971.

CHAPTER 7

SCOPE OF REVIEW

We examined the management of the HPEI Program by NIH. We reviewed the legislation authorizing the Program and NIH policies, procedures, and practices for managing it.

We reviewed the grant-supported activities at six medical and six dental schools which had expended a total of about \$13.8 million in grant funds through June 30, 1970. We also held discussions with appropriate officials of NIH and the grantees.

Our work was performed at NIH headquarters in Bethesda, Maryland, and at medical and dental schools located in the States of Illinois, Missouri, Nebraska, and Wisconsin.



DEPARTMENT OF HEALTH EDUCATION AND WELFARE
WASHINGTON D C 20201

OFFICE OF THE SECRETARY

JUN 13 1972


Mr Morton A Myers
Assistant Director
Civil Division
General Accounting Office
Washington, D.C 20548

Dear Mr Myers

The Secretary has asked that I reply to your letter of March 20, 1972, which transmitted a draft of a GAO audit report entitled, "Management of Health Professions Educational Improvement Program " The enclosed statement sets forth the Department's comments on the specific findings and recommendations in the draft report.

We appreciate the opportunity to review and comment on the draft report.

Sincerely yours,


James B. Cardwell
Assistant Secretary, Comptroller

Enclosure

APPENDIX I

DHEW COMMENTS ON GAO DRAFT REPORT ON MANAGEMENT OF HEALTH PROFESSIONS EDUCATIONAL IMPROVEMENT PROGRAM, NIH

OVERALL COMMENTS

1 The report's findings are based mostly on the results of studies of twelve midwestern grantees, six medical and six dental schools. Nearly all of these grantees now have or in the past have had serious financial and/or management problems. Therefore, these twelve schools are not necessarily representative of the total universe of health professions schools with respect to the types of practices reviewed.

2 Some of the recommendations, such as those related to eligibility of faculty salary for formula grant support, or measurement of quality, are more relevant to the Health Professions Educational Assistance Programs under past legislation than to the programs authorized by the Comprehensive Health Manpower Act of 1971 (P L 92-157). Formula grant (capitation) support is now broader in scope and special project assistance more targeted than the report recognizes. A separate authorization has been provided for grants to schools which are in financial distress or accreditation difficulty, removing these purposes from the scope of the special project authority.

3 The report overemphasizes numbers and ratios as indicators of manpower supply output and requirements. The report does not appear to take cognizance of the full range of cooperative efforts now underway by the Congress and the Department of Health, Education, and Welfare (DHEW) to assess health manpower needs and determine the type and amount of assistance required by health professions schools in acting to meet those needs. For example, Section 205 of the Comprehensive Health Manpower Training Act of 1971 requires that the Secretary request the National Academy of Sciences to conduct studies to determine the national average annual per student educational cost of health professions schools to provide training for the first professional degree. An interim report to the Congress is required by March 30, 1973, with a final report by January 1, 1974. In December 1971, the Secretary transmitted to the Congress a report on the need for emergency financial assistance to medical and dental schools as required by Title I, Section 102(b) of P L 91-519. Currently, NIH is studying factors related to the development of alternative health manpower educational strategies. The relationships of these recent developments to this report is indicated in our comments on individual recommendations.

4 Although the details in the report are essentially accurate, one statement needs clarification

"Bureau officials
told us in January 1972 - after enactment of the Comprehensive
Health Manpower Training Act of 1971 - that the funding problem
on construction grants had been alleviated to some extent "

The backlog of approved but unfunded construction grants, in excess of \$700 million, was eliminated when the Health Professions Educational Assistance Act legislation expired June 30, 1971. Since the application materials for construction assistance under the new Act were not mailed until early April 1972, we have not yet received many new applications. However, it is believed that amounts which will be requested under these requests will be greater than the funds available.

Therefore, the only alleviation may be in the form of reduced demand rather than greater funding. The sentence quoted would seem to imply that the construction program will provide more assistance than in the past. This would be an incorrect impression.

GAO RECOMMENDATIONS

We recommend that NIH

--determine the supply of personnel required in each of the health professions to adequately serve the needs of the Nation's population, and

--establish a plan, including annual goals for enrollment increases in health professions schools, for attaining the required supply, giving consideration to the capabilities of health professions schools and the availability of Federal and non-Federal funds.

DHEW Comments

A coordinated approach to these matters is already well underway in the DHEW. DHEW recently reported data on projected health manpower supply and requirements (forwarded under separate cover to GAO on April 25, 1972) to the Labor-HEW Subcommittee of the House Appropriations Committee (Hearings, March 22, 1972). NIH, HSMHA and the OS, DHEW are currently collaborating on a study to develop Alternative Health Manpower Educational Strategies, designed to (a) improve estimates of the current health manpower pool, (b) determine health manpower requirements under alternative systems for the delivery of health services,

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(c) identify modes of government intervention into the health manpower production system that will target the supply to meet the projected need, and (d) develop models of methods for government intervention into production systems to assess their impact

The Division of Manpower Intelligence was established within BHME in October 1970 to carry out analyses of these types. Since its establishment, the Division has been revising estimates of the requirements for manpower in the health fields and developing improved methods to replace crude procedures involving the ratio of health professionals to population. Work with the professional associations has been undertaken to reassess the current requirements data that do exist and to develop new approaches that will yield revised and refined requirements estimates. Major efforts within the Division focus on the development of a detailed series of requirements data projections by occupation for the health professions and allied health occupations for 1980 and beyond. This activity involves the investigation of several different alternative methods of defining requirements in terms of alternate manpower mix and other assumptions about trends in the health care delivery system.

The Division of Manpower Intelligence is also working to improve the analysis and projection of health manpower supply data. This includes such activities as analyses of the factors which contribute to increased availability of health manpower and data collection projects to obtain information about current health manpower resources.

The differences between projections of supply and various estimates of requirements may yield estimated shortages of health manpower. At that point, the Federal and non-Federal intervention options need to be evaluated to determine the most feasible approach to alleviating the shortage problem. Many options exist for meeting requirements, such as building additional schools, shortening the curriculum, training Ph D 's to become M D 's in a short time span, increasing the output of existing schools, changing the personnel mix to include more auxiliaries, and many combinations of available alternatives.

As adequate data become more available and the health care delivery system takes on a more predictable posture, the plans for enrollments to meet needs can be more firmly established and goals established for meeting these needs will be set by BHME. The attainment of fixed goals is directly dependent upon specific legislative provisions (e.g., enrollment increase requirements for capitation grants), the level of appropriations, and other priorities.

GAO RECOMMENDATION

[See GAO note]

GAO note The recommendation in our draft report has been deleted from this report in view of HEW's position with which we are in general agreement.

DHEW Comments

Although the NIH and the non-Federal consultants who review grant applications have a continuing concern with the assessment of quality and employ devices of the type cited in the report (e g , faculty-student ratios, etc), the measurement of educational quality is an extremely complex problem requiring the long-range development of new methods and techniques. Ultimately, it will be necessary to try to assess the relationship between the characteristics of health professions education and the quality of care rendered by graduates of the various schools (although programs producing a high proportion of teachers and researchers pose another type of problem). Nationally, discussions are taking place as to peer review of quality of care rendered, particularly with reference to the third party payment system for financing care.

In view of the changing emphases of these programs, however, we believe that undue emphasis should not be placed on the generic reference to "quality" in the title of Part E (Title VII, PHS Act) "Grants and Contracts to Improve the Quality of Schools." The Health Professions Educational Assistance Amendments of 1965 authorized grants to assist schools "to improve the quality of their educational programs." (Section 770, PHS Act.) This language was deleted by the Health Manpower Act of 1968. Prior to the Health Manpower Act of 1968, priority in awarding "special improvement grants" was given to projects contributing to the maintenance of, or provisions for, accreditation. Removal of problems threatening accreditation represented an observable qualitative change in the grantee institutions.

The nature of the special project grant program was markedly altered by the Health Manpower Act of 1968. Consistent with the legislative history, funds available for special project grants were awarded almost exclusively for major expansion of enrollment and to prevent the closing or curtailment of enrollment in financially distressed schools. The attainment of these purposes was a readily verifiable fact.

The Comprehensive Health Manpower Training Act of 1971 authorizes special project grants and contracts for some thirteen distinct purposes, each of which may be approached in terms of specific, measurable goals. Under the DHEW Operational Planning System, BHME has specified such goals for the seven purposes considered to be of the highest priority in fiscal year 1972, plus the startup grants and grants to convert two-year schools of medicine (new section 771 of the PHS Act). Grants for the purpose of preventing the closing of schools or loss of accreditation are now financed under a separate authorization (new section 773, PHS Act).

Thus, the established professional accrediting mechanisms continue to provide a reference point for those sections of Part E concerned with the quality of schools in a broad sense. Further, the increased targeting of special project grants for purposes specified in the new

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legislation and the requirement that schools submit a plan for particular changes in order to qualify for capitation grants provide specific program goals which are more readily measurable than was true under previous legislative authority

GAO RECOMMENDATION

We also recommend that NIH establish uniform criteria for classifying faculty members as full or part-time and establish specific criteria for determining the extent to which grant funds may be used to support a faculty member's salary

DHEW Comments

The recommendation to seek criteria for classifying members as full or part-time has merit and concerns a significant problem in the management of these programs, but it would not appear practicable or desirable to impose such criteria unilaterally upon academic institutions. The NIH will initiate efforts through associations of the schools aimed toward the development of such criteria.

Concerning the recommendation to establish criteria to determine the extent to which faculty salary is eligible for support, it is critically important to differentiate between capitation (or institutional) grants and special project grants. Policy material accompanying every special project grant provides that "salaries and wages of professional staff may be charged to the grant in proportion to the distribution of their total effort between activities within the scope of the approved project and other activities." It should be noted, however, that a project for the purpose of preventing closure of a school might appropriately encompass the full support of some faculty regardless of the distribution of their time between teaching and other activities. This will continue to be true of "financial distress" grants as they are funded under the new section 773 of the PHS Act. Similarly, project grants for the purpose of a specific expansion in total enrollment may necessitate the support of new faculty positions beyond the extent indicated by an accounting of effort devoted strictly to teaching.

The appropriate use of funds has been broader with respect to the institutional grants, which have been available for any purpose (unless prohibited by regulation) which the school judges will most effectively advance its educational program. Although hospital and patient care costs have been prohibited, grantees have been permitted to pay salaries of clinical teaching staff. Similarly, the prohibition on research did not preclude full payment of the salaries of faculty members principally engaged in teaching and whose research activities were limited or incidental to their teaching responsibilities. The Comprehensive Health Manpower Act of 1971 replaced the "institutional" grant program with authority for a more flexible "capitation" grant to provide a dependable support base for the educational programs of the health professions.

schools Policies developed for the capitation grants to be awarded under this new authorization permit payment of the full salary of faculty with clinical or other teaching responsibilities even though a portion of their time is devoted to research or patient care This is consistent with the advice of the Office of General Counsel that "the legislative history clearly reveals that the increased support available under the capitation program is to be viewed, with certain restrictions outlined below /with respect to construction and student aid/ as a general subsidy to aid and stabilize the financial situations of health professions institutions, with the Federal Government thus helping 'to underwrite the costs of health professions educational institutions' (S Rep No 244, 92nd Cong , 1st Ses 16 (1971), H Rep No 8623, 92nd Cong , 1st Ses 28,29 (1971) More specifically with regard to the presently prohibited uses found in section 57 508(c), the Senate clearly considered the cost of research and patient care within the costs appropriate for expenditure of capitation grants (S Rep No 244, 92nd Cong , 1st Ses 16 (1971) " (Memorandum, OGC (Berkley) to BHME (Whiteside), November 10, 1971) In short, we believe that payment of the full salary of teaching faculty from capitation funds is consistent with the intent of Congress

GAO RECOMMENDATIONS

We recommend that NIH restate to grantees the requirement for payroll substantiation systems and that it take follow-up action to assure that such systems are maintained We recommend also that NIH require grantees to include in their substantiation systems a functional breakdown of faculty members' activities

DHEW Comments

The NIH policy issuances regarding the Department of Health, Education, and Welfare payroll substantiation requirements have been specifically provided to all of the health professions schools, as well as their parent institutions However, NIH will again call attention to these policies and their applicability to special project grants In addition, the limited senior grants management staff of BHME will follow up with those institutions suspected of being weakest in the management of such systems The recommendation will also be called to the attention of the DHEW Audit Agency, which reviews the adequacy of payroll substantiation systems in the course of its regular reviews of major grantee institutions

However, we wish to strongly emphasize our view that it would not be desirable to revise present policies regarding payroll substantiation to make mandatory a functional breakdown of faculty activities into teaching, research, or patient care It cannot be assumed that this trichotomy is equatable with eligibility for grant support Not only is this untrue of capitation grants (new section 770, PHS Act), startup grants (new section 771, PHS Act), and financial distress grants (new

section 773, PHS Act), but it is also artificial with respect to special project grants (section 772, PHS Act) for broad purposes, such as meeting expenses related to a major increase in enrollment

As illustrated in the DHEW report on the need for emergency financial assistance to medical and dental schools (December 1971), a great deal remains to be done before we can meaningfully delineate the "educational" function of a school as opposed to "instructional" activity (see Section VI, pages 97-100 of the DHEW Report for a discussion of these problems) The studies required under Section 205 of P L 92-157 to determine national average per student educational costs, which are to be undertaken by the National Academy of Sciences, should represent an important step in the efforts to develop reliable methodologies for this purpose NIH/BHME will be requiring schools seeking a financial distress grant under Section 773 of the PHS Act to conduct a comprehensive cost analysis study designed to indicate the nature and magnitude of differences between cost and income by activity, but this requirement is quite different in intent and nature from recommendation 5 of the report We do not believe that it is either practicable or desirable at this time to add to general NIH payroll substantiation requirements applicable to all grantees a mandatory requirement to attempt a broad functional breakdown of individual faculty activities, such as educational, research, and patient care activities

PRINCIPAL OFFICIALS
OF THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
RESPONSIBLE FOR THE ADMINISTRATION OF ACTIVITIES
DISCUSSED IN THIS REPORT

		<u>Tenure of office</u>	
		<u>From</u>	<u>To</u>
SECRETARY OF HEALTH, EDUCATION, AND WELFARE.			
Elliot L. Richardson	June 1970	Present	
Robert H. Finch	Jan. 1969	June 1970	
Wilbur J. Cohen	Mar. 1968	Jan. 1969	
John W. Gardner	Aug. 1965	Mar. 1968	
ASSISTANT SECRETARY (HEALTH AND SCIENTIFIC AFFAIRS)			
Merlin K. DuVal, Jr.	July 1971	Present	
Roger O. Egeberg	July 1969	June 1971	
Philip R. Lee	Nov. 1965	Jan. 1969	
DEPUTY ASSISTANT SECRETARY/ SURGEON GENERAL.			
Jesse L. Steinfeld	Dec. 1969	Present	
William H. Stewart	Oct. 1965	July 1969	
DIRECTOR, NATIONAL INSTITUTES OF HEALTH.			
Robert Q. Marston	Sept. 1968	Present	
James A. Shannon	Aug. 1955	Aug. 1968	
DIRECTOR, BUREAU OF HEALTH MANPOWER EDUCATION (note a)			
Kenneth M. Endicott	Nov. 1969	Present	
Leonard D. Fenninger	Jan. 1967	Nov. 1969	

^aThe Bureau of Health Manpower was created in January 1967 from a number of ongoing programs. It was an operating bureau of the Public Health Service until April 1968, when it was transferred to NIH. The Bureau's name was changed to the Bureau of Health Professions Education and Manpower Training in January 1969 and to the Bureau of Health Manpower Education in September 1970.

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